

Claims

What is claimed is:

1. A method of providing custom calling party identification (CID) information, the method comprising:  
5 determining that customized CID information is desired for a call originating from an originating endpoint; and

10 providing the customized CID information in association with the call;  
wherein a device receiving the call can receive the customized CID information.

15 2. The method of claim 1 wherein the step of determining comprises determining whether a number dialed for the call matches a stored number associated with the origination endpoint.

20 3. The method of claim 2 wherein the stored number is associated with custom CID information, and wherein the step of providing comprises:  
setting a CID message in accordance with the custom CID information; and  
transmitting the CID message as the customized CID  
25 information.

30 4. The method of claim 3 wherein the custom CID information includes at least one of a custom name value and a custom number value, and wherein the step of setting comprises setting at least one of a generic name portion and a generic number portion in the CID message to the custom name and number values, respectively.

5. The method of claim 4 further comprising maintaining fixed CID information in the CID message uniquely identifying the origination end-point for call record purposes.

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6. The method of claim 2 wherein at least one list of stored numbers is associated with the origination end-point, each of the at least one list having corresponding custom CID information, and wherein the step of providing comprises:

setting a CID message in accordance with the custom CID information corresponding to one of the at least one lists of stored numbers having a matching number with respect to the number dialed; and

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transmitting the CID message.

7. The method of claim 6 wherein the least one list of stored numbers is stored in a local exchange switch associated with the origination end-point, and further comprising accessing a database to retrieve custom CID information if a match exists between the number dialed and one of the at least one list of stored numbers.

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8. The method of claim 7 wherein the step of accessing the database comprises accessing a local database associated with the local exchange switch.

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9. The method of claim 7 wherein the step of accessing the database comprises accessing a remote database associated with a telecommunications network.

10. The method of claim 9 wherein the step of accessing the remote database comprises using SS7 signaling to access and query the remote database.

5 11. The method of claim 9 wherein the step of accessing the remote database comprises using advanced intelligent network signaling to access and query the remote database.

10 12. The method of claim 10 wherein the step of accessing the remote database comprises using Internet Protocol signaling to access and query the remote database through the Internet.

15 13. The method of claim 1 wherein the step of determining comprises receiving a feature code indicating a desire for the customized CID information from customer premises equipment (CPE) associated with the origination end-point.

20 14. The method of claim 1 wherein the step of determining comprises receiving a feature code indicating a desire for the customized CID information.

25 15. The method of claim 13 further comprising receiving custom CID information from the CPE in association with the feature code for use in the customized CID information provided in association with the call.

30 16. The method of claim 13 further comprising maintaining the customized CID information for subsequent calls originated from the origination end-point until

receiving a new feature code bearing a use of changed customized CID information.

17. The method of claim 13 further comprising  
5 retrieving custom CID information from a database for use  
in the customized CID information in response to  
receiving the feature code.

18. The method of claim 1 further comprising  
10 receiving at least one desired value for use in  
generating the customized CID information from a user  
associated with the origination end-point.

19. The method of claim 18 wherein the step of  
15 receiving comprises receiving the at least one desired  
value in a local exchange switch associated with the  
origination end-point based on:

20 providing an interactive programming interface via  
customer premises equipment (CPE) associated with the  
origination end-point; and

entering a programming mode wherein the user enters  
the at least one desired value via the CPE.

20. The method of claim 19 further comprising  
25 receiving dialable number information defining at least  
one dialable number entered by the user via the CPE for  
association with the at least one desired value, wherein  
the user can define a plurality of groups of dialable  
numbers and associate respective ones of a plurality of  
30 desired values with respective ones of the plurality of  
groups of dialable numbers.

21. The method of claim 19 wherein the step of providing the interactive programming interface comprises downloading an ADSI script to the CPE.

5        22. The method of claim 18 wherein the step of receiving comprises receiving the at least one desired value in a local exchange switch associated with the origination end-point based on:

10              providing an Internet-accessible user interface; and receiving the at least one desired value for the origination end-point via the Internet-accessible user interface.

15        23. The method of claim 22 further comprising receiving dialable number information defining at least one dialable number entered by the user via the Internet-accessible user interface for association with the at least one desired value, wherein the user can define a plurality of groups of dialable numbers and associate respective ones of a plurality of desired values with respective ones of the plurality of groups of dialable numbers.

20        24. The method of claim 18 wherein the step of receiving comprises receiving the at least one desired value in a local exchange switch associated with the origination end-point based on providing a voice menu system accessible via customer premises equipment (CPE) associated with the origination end-point allowing users to specify at least one desired value for the custom CID information.

25        25. The method of claim 24 further comprising receiving voice menu selections determining an

association between the at least one desired value and corresponding dialable numbers that can be dialed via the CPE.

5        26. A computer readable media comprising software  
for instructing a telecommunications computer system to:  
determine that customized CID information is desired  
for a call originating from an origination end-point; and  
provide the customized CID information in  
10 association with the call.

27. The computer readable media comprising software  
of claim 26 wherein the instruction to determine that  
customized CID information is desired comprises  
15 instructions to:

receive dialed number information for the call; and  
determine whether the dialed number information  
matches stored number information associated with the  
origination end-point.

20        28. The computer readable media comprising software  
of claim 27 wherein the telecommunications computer  
system is a local exchange switch associated with the  
origination end-point and the stored number information  
25 is a screen list stored in the local exchange switch for  
the origination end-point, and further wherein the  
instruction to determine whether the dialed number  
information matches stored number information comprises  
instructions to compare the dialed number information  
30 with the stored number information in the screen list,  
wherein the stored number information includes at least  
one dialable number for which customized CID information  
is desired.

29. The computer readable media comprising software of claim 27 wherein the telecommunications computer system is a local exchange switch associated with the origination end-point and the stored number information matching the number dialed has at least one of a corresponding stored custom name value and a corresponding stored custom number value, and further wherein the instruction to provide the customized CID information in association with the call comprises instructions to:

retrieve at least one of the corresponding stored name and stored number values; and

transmit the customized CID information including the at least one of the corresponding stored name and stored number values.

30. The computer readable media comprising software of claim 29 wherein the instruction to retrieve at least one of the corresponding stored name and stored number values comprises instructions to access a remote database through an advanced intelligent network.

31. The computer readable media comprising software of claim 29 wherein the instruction to retrieve at least one of the corresponding stored name and stored number values comprises instructions to access a remote database through an SS7 network.

32. The computer readable media comprising software of claim 29 wherein the instruction to retrieve at least one of the corresponding stored name and stored number values comprises instructions to access a remote database through the Internet.

33. The computer readable media comprising software of claim 29 for further instructing the telecommunications computer system to:

support a user programming interface; and

5 receive dialable number information for storage as the stored number information from a user via the user programming interface.

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10 34. The computer readable media comprising software

of claim 33 for further instructing the telecommunications computer system to:

receive at least one of desired name and number values for storage as the corresponding stored custom name and number values.

15 35. The computer readable media comprising software of claim 29 for further instructing the telecommunications computer system to:

support a user programming interface via customer premises equipment (CPE) connected to the origination end-point; and

20 receive dialable number information for storage as the stored number information from a user via the user programming interface.

25 36. The computer readable media comprising software of claim 26 wherein the instruction to determine that customized CID information is desired for a call originating from an origination end-point comprises

30 instructions to determine if a feature code corresponding to a desire for customized CID information is received in advance of the call.

37. The computer readable media comprising software of claim 36 for further instructing the telecommunications computer system to:

receive selection information in conjunction with  
5 the feature code; and

select at least one of a desired custom name value and a desired custom number value corresponding to the selection information for use in the customized CID information.

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~~38.~~ An apparatus facilitating provision of custom calling party identification (CID) comprising:

a means for selectively interconnecting a plurality of origination end-points in support of  
15 telecommunications functions based on dialable number information entered via individual ones of the plurality of origination end-points;

a means for determining that customized CID information is desired for a call originating from a  
20 given one of the plurality of origination end-points;

a means for determining at least one custom value for use as at least a part of the customized CID information; and

a means for transmitting the custom CID information  
25 in association with the call.

39. The apparatus of claim 38 wherein the means for determining that customized CID information is desired for a call originating from a given one of the plurality of origination end-points comprises a means for determining whether a number dialed for the call matches one in a predefined list of stored numbers.

40. The apparatus of claim 39 wherein the means for determining at least one custom value for use as at least a part of the customized CID information comprises a means for retrieving the at least one custom value from a database.

41. The apparatus of claim 38 wherein the means for determining that customized CID information is desired for a call originating from a given one of the plurality of origination end-points comprises a means for determining whether a feature code indicating a desire for the customized CID information is received in advance of the call.

42. The apparatus of claim 41 wherein the means for determining at least one custom value for use as at least a part of the customized CID information comprises a means for receiving at least one of a custom name value and a custom number value in association with the feature code received through the origination end-point.

43. The apparatus of claim 41 wherein selection information is received in association with the feature code and the means for determining at least one custom value for use as at least a part of the customized CID information comprises a means for accessing a database to retrieve the at least one custom value based on the selection information.

44. The apparatus of claim 43 wherein the means for accessing the database comprises a means for communicating with a remote database via an SS7 network.

45. The apparatus of claim 43 wherein the means for accessing the database comprises a means for communicating with a remote database via an advanced intelligent network.

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46. The apparatus of claim 43 wherein the means for accessing the database comprises a means for communicating with a remote database via an internet.

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47. A telecommunications local exchange switch comprising:

a first interface for connecting with a plurality of origination end-points;

15 a second interface for connecting with a telecommunications network;

a switching system operatively associated with the first and second interfaces for selectively interconnecting individual ones of the origination end-points, and for selectively connecting individual ones of the origination end-points with the telecommunications network; and

20 a controller for supporting overall operations of the telecommunications local exchange switch in accordance with program instructions and operating data;

25 said controller adapted to selectively provide customized CID information in association with calls originating from at least one of the plurality of origination end-points based on the program instructions and operating data.

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48. The telecommunications local exchange switch of claim 47 wherein the controller selectively provides the customized CID information based on determining whether a number dialed in association with a call originating from

the at least one origination end-point matches one in a predefined list of stored numbers.

49. The telecommunications local exchange switch of  
5 claim 47 wherein the controller determines at least one custom value for the customized CID information based on retrieving the at least one custom value from a database associated with the telecommunications local exchange switch.

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50. The telecommunications local exchange switch of claim 49 wherein the controller is further adapted to access the database via a S7 network.

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51. The telecommunications local exchange switch of claim 49 wherein the controller is further adapted to access the database via an internet.

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52. The telecommunications local exchange switch of claim 49 wherein the controller is further adapted to access the database via an advanced intelligent network.

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53. The telecommunications local exchange switch of claim 47 wherein the controller determines that the customized CID information is desired for a call originating from a given one of the plurality of origination end-points based on determining whether a feature code indicating a desire for the customized CID information is received through the origination end-point in advance of the call.

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54. The telecommunications local exchange switch of claim 53 wherein the controller determines at least one custom value for the customized CID information based on

information received through a telephony line in association with the feature code.

55. The telecommunications local exchange switch of  
5 claim 53 wherein the controller determines at least one custom value for the customized CID information based on selection information received in association with the feature code that is used in accessing a database associated with the telecommunications local exchange  
10 switch to retrieve the at least one custom value.

56. A method of providing custom calling party identification (CID) information, the method comprising:

15 determining that customized CID information is desired for a call originating from an originating endpoint;

comparing the customized caller CID information with inappropriate CID information; and

20 providing the customized CID information in association with the call if the customized CID information does not match the inappropriate CID information;

25 wherein a device receiving the call can receive the customized CID information.